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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,209	03/12/2004	Wolfgang Bauer	2003P03809 US	8567
7590 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPT. 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER MATTIS, JASON E	
			ART UNIT 2416	PAPER NUMBER
			MAIL DATE 11/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/800,209

**Applicant(s)**

BAUER ET AL.

**Examiner**

JASON E. MATTIS

**Art Unit**

2416

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

1. This Office Action is in response to the Amendment filed 8/15/08. Claims 3, 4, 9, and 10 have been cancelled. Claims 1, 2, and 5-8 are currently pending in the application.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pang et al. (U.S. Publication US 2003/0112758 A1) in view of Borella et al. (U.S. Pat. 6434606 B1).

**With respect to claims 1 and 6**, Pang et al. discloses a jitter buffer regulating circuit operating a method for regulating a jitter buffer **(See the abstract of Pang et al. for reference to a method and system for determining of jitter buffer sizes and delays)**. Pang et al. also discloses registering a transmission delay due to buffering for data packets of a data packet stream **(See pages 3-4 paragraphs 54 and 58-60 of Pang et al. for reference to registering transmission delay times due to buffering)**.

Pang et al. further discloses continuously deriving weighted mean delay values from registered transmission delays **(See pages 3-4 paragraphs 58-60 and 70 for reference to continuously computing a mean of a histogram of the delay times)**. Pang et al. also discloses regulating a read-out speed of the jitter buffer as a function of the continuously derived weighted mean delay value **(See page 6 paragraphs 90-91 of Pang et al. for reference to adjusting a playout time, which corresponds to adjusting a read-out speed, based on the calculated mean delays)**. Pang et al. further discloses comparing a current delay with a previous delay and determining the weighting of the current delay as a result of the comparison **(See pages 3-4 paragraphs 58-60 of Pang et al. for reference to using a first weight, alpha, if the current delay is shorter than the previous delay and for reference to using a second weight, beta, if the current delay is longer than the previous delay, meaning the weights are chosen based on a comparison)**. Pang et al. also discloses using a first predefined weight value if the currently registered transmission delay is shorter than the previously derived delay and using a second predefined weight if the currently registered transmission delay is longer than the previously derived delay **(See pages 3-4 paragraphs 58-60 of Pang et al. for reference to using a first weight, alpha, if the current delay is shorter than the previous delay and for reference to using a second weight, beta, if the current delay is longer than the previous delay)**. Pang et al. does not specifically disclose that a shorter transmission delay is weighted higher than a longer transmission delay. Although Pang et al. does disclose adjusting the operation of a jitter buffer to control delay and packet loss **(See**

**page 1 paragraphs 5 and 6 and page 17 paragraph 181 of Pang et al. for reference to controlling a jitter buffer in order to control quality of service elements including delay and packet loss, meaning weights alpha and beta inherently must be chosen such that their ratio is selected to meet a selected quality of service)** Pang et al. does not specifically disclose that a quotient of the weights is selected to define a tradeoff between a delay introduced by the jitter buffer and a packet loss rate.

**With respect to claims 1 and 6**, although Pang et al. does disclose using different predefined weights depending on whether a transmission delay is shorter than or longer than a previous transmission delay **(See pages 3-4 paragraphs 58-60 of Pang et al. for reference to using a first weight, alpha, if the current delay is shorter than the previous delay and for reference to using a second weight, beta, if the current delay is longer than the previous delay)**, Pang et al. does not specifically disclose that a shorter transmission delay is weighted higher than a longer transmission delay. Choosing the exact values for alpha and beta would involve an obvious experimentation for one of ordinary skill in the art when setting up the system and method of Pang et al. Using a higher weight for a shorter transmission delay would have become obvious to one of ordinary skill in the art at the time of the invention after this experimentation since the advantage of allowing the jitter buffer to adapt more quickly to a short burst of packets incurring long delays would be gained using this configuration **(See page 3 paragraph 58 of Pang et al. for reference to this advantage)**.

**With respect to claims 1 and 6**, Borella et al., in the field of communications, discloses adjusting the operating values of a jitter buffer to define a selected tradeoff between a delay introduced by the jitter buffer and a data packet loss rate (**See column 16 line 61 to column 17 line 25 and column 19 lines 54-65 of Borella et al. for reference to a jitter buffer's operation being adapted to conform to a selected tradeoff between a packet delay caused by the buffer and a packet loss rate**). Adjusting the operating values of a jitter buffer to define a selected tradeoff between a delay introduced by the jitter buffer and a data packet loss rate has the advantage of allowing the operation of a jitter buffer to be optimized for according to the sensitivity of the type of data being transmitted through the jitter buffer (**See column 17 line 44 to column 18 line 7 and Figure 11 of Borella et al. for reference to selecting a tradeoff between delay and loss to conform to a format and type of data being transmitted through a jitter buffer**).

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Borella et al., to combine adjusting the operating values of a jitter buffer to define a selected tradeoff between a delay introduced by the jitter buffer and a data packet loss rate, as suggested by Borella et al., with the system and method of Pang et al., with the motivation being to allow the operation of a jitter buffer to be optimized for according to the sensitivity of the type of data being transmitted through the jitter buffer.

**With respect to claim 2**, Pang et al. discloses deriving a new weighted mean delay value from a current delay and the previously derived weighted mean delay value

(See page 4 paragraph 70 of Pang et al. for reference to using a history of delay values to computer new mean delay values, meaning a new weighted mean delay value is derived from a current delay and the previously derived weighted mean delay value).

With respect to claim 7, Pang et al. discloses comparing a current delay with a previous delay and determining the weighting of the current delay as a result of the comparison (See pages 3-4 paragraphs 58-60 of Pang et al. for reference to using a first weight, alpha, if the current delay is shorter than the previous delay and for reference to using a second weight, beta, if the current delay is longer than the previous delay, meaning the weights are chosen based on a comparison).

With respect to claims 5 and 8, Pang et al. discloses using a single regulating circuit (See the abstract, page 5 paragraph 89, and Figure 1g of Pang et al. for reference to using a single circuit to regulated the jitter buffer).

### ***Response to Arguments***

4. Applicant's arguments filed 8/15/08 have been fully considered but they are not persuasive.

Regarding Applicant's argument that the teachings of Pang et al. and Borella et al. do not render obvious the claim limitation stating "wherein a quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and a data packet loss rate", the

Examiner respectfully disagrees. As shown in the rejections above, Pang et al. discloses weighting a currently registered transmission delay using a first predefined weight value if the currently registered transmission delay is shorter than the previously derived delay and using a second predefined weight if the currently registered transmission delay is longer than the previously derived delay (See pages 3-4 paragraphs 58-60 of Pang et al. for reference to using a first weight,  $\alpha$ , if the current delay is shorter than the previous delay and for reference to using a second weight,  $\beta$ , if the current delay is longer than the previous delay). Pang et al. does not further discuss how the values of  $\alpha$  and  $\beta$  are to be selected; however, one of ordinary skill in the art at the time of the invention would be motivated to use normal experimentation to evaluate jitter buffer operation using different values of  $\alpha$  and  $\beta$  and to select optimum values of  $\alpha$  and  $\beta$  for use. Borella et al. discloses that jitter buffer evaluation is a tradeoff between packet delay and packet loss (See column 16 lines 61-62 of Borella et al.). Applicant's further acknowledge that such a tradeoff is "generically applicable to any data packet-based communication scheme" (See page 6 lines 4-7 of the Applicant's Remarks). Thus, when presented with the teachings of Borella et al., one of ordinary skill in the art would have recognized that the values selected for  $\alpha$  and  $\beta$  (and, inherently, the resulting quotient of  $\alpha$  and  $\beta$ ) in the equations of Pang et al. effect the tradeoff between packet delay and packet loss. Therefore, one of ordinary skill in the art at the time of the invention would have recognized that the values of  $\alpha$  and  $\beta$  and, in consequence, their resulting



quotient, should be selected to define a desired tradeoff between packet delay and packet loss, as claimed.

Regarding Applicant's arguments that the proposed modification of Pang et al. in view of the teachings of Borella et al. would change the principle of operation of the invention being modified, the Examiner respectfully disagrees. Borella et al. is merely used in the rejections to show an explicit teaching that the evaluation of the operation of a jitter buffer is defined by a tradeoff between packet delay and packet loss. Using this knowledge when selecting the values to use for alpha and beta in the equations taught by Pang et al. does not change the principle of operation of the system and method disclosed by Pang et al., as argued by the applicant. The jitter buffer of Pang et al. would still operate in the same manner as disclosed by Pang et al.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason E Mattis  
Examiner  
Art Unit 2416

JEM

/Jason E Mattis/  
Examiner, Art Unit 2416